Visual Comparison of Deep Brain Stimulation Parameters

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Motivation
Clinical Relevance

- 14th leading cause of death (US)!
- ~500k to a million affected
- ~55k new diagnoses / year
  - Aging population...
- Generally treated via drugs
Deep Brain Stimulation
DBS Challenges (Continued)

Visual Comparison
DBS Solution

- DBS programming: 4 hours → 4 minutes!
Data Notification

1. First Start Initialization
   Unique Device ID, Device Name, and (optional) PIN Transfer

2. Push Notification Request
   TCP Stream
   SSL Encrypted
   Message
   Server URL
   Session Key

3. Push Notification Delivery
   Message
   Server URL
   Session Key

4. Data Set Request
   Session Key Encrypted
   Unique Device ID

5. Data Set Transmission
   Session Key Encrypted
   Data Set
Atlas Generation
Summary
Future
Questions?